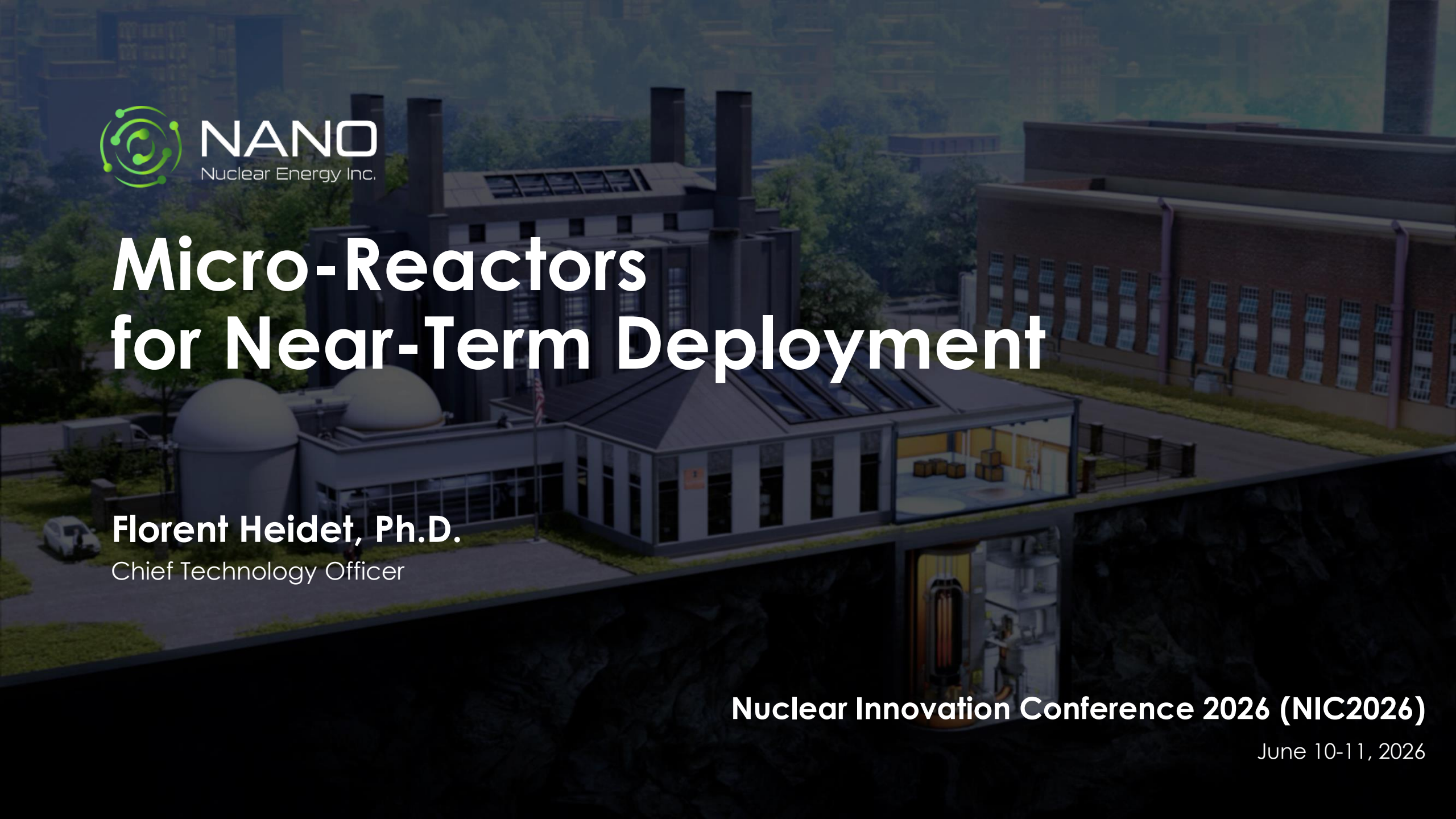

NANO Nuclear Energy Inc.

Micro-Reactors for Near-Term Deployment

Florent Heidet, Ph.D.
Chief Technology Officer

Nuclear Innovation Conference 2026 (NIC2026)
June 10-11, 2026

Outline

- Overview of NANO Nuclear Energy
- Introduction of Micro Modular Reactors (MMRs)
- Relevance of MMRs
- KRONOS MMR Technical Overview
- MMRs Deployment Versatility
- University of Illinois MMR Deployment Project


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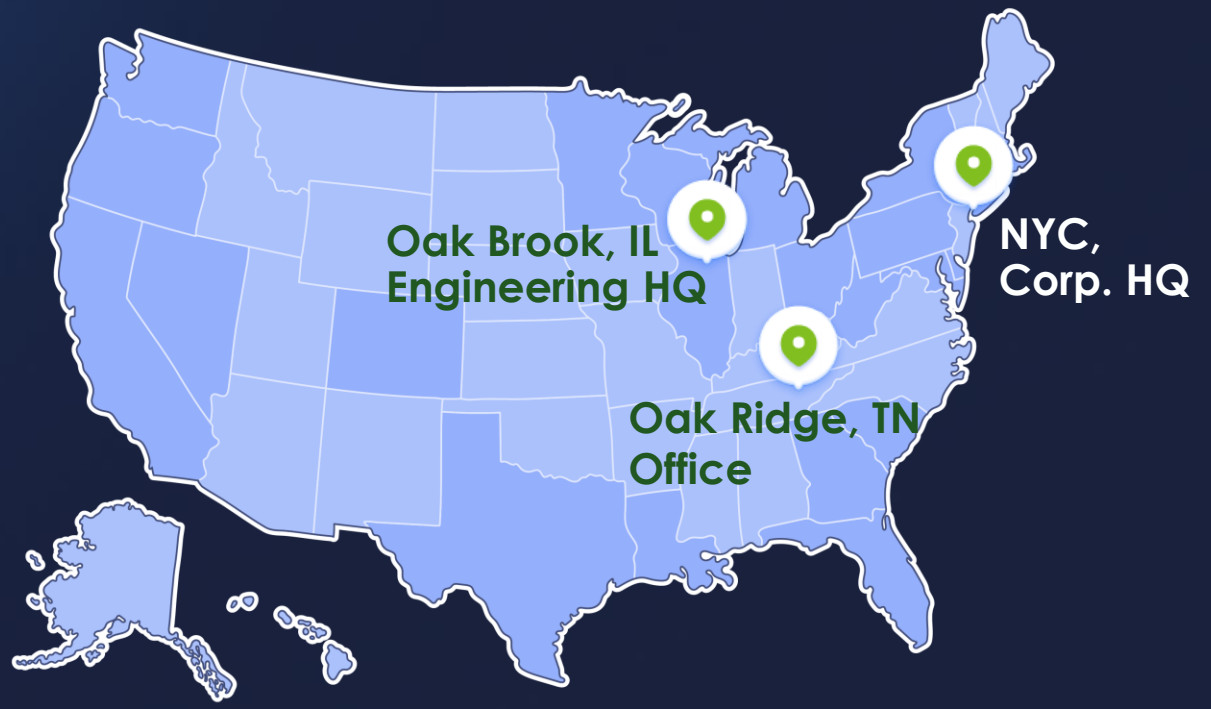
Overview of NANO Nuclear Energy

NANO Nuclear Energy

Company Overview

- **Company:** NANO Nuclear Energy Inc. is an advanced nuclear technology company **integrated** across microreactor development, nuclear fuel supply chain development, and transportation capabilities
- **Headquarters & Operations:** Headquartered in New York, NY, with engineering, R&D, and demonstration facilities in Oak Brook, IL
- **Corporate Status:** Publicly listed company (NASDAQ: NNE) operating under U.S. SEC
    - Incorporated in 2022; **expanding rapidly** through technology acquisition, capital formation, and strategic federal engagements



New Chicago-area facility

Reactor engineering center in Oak Brook, IL

- **Total footprint**: 23,500 sqft
  - Space for over 100 engineers
- **Testing space**: 7,400 sqft
  - Planned Integration tests on half-scale KRONOS loop
  - Separate effects tests
  - Currently under construction
- Moved into the facility in March 2026

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Technology Overview

Reactor Products

KRONOS MMR™

Stationary, modular HTGR for dedicated power applications

LOKI MMR™

Mobile micro-HTGR for terrestrial, marine, and space power

ZEUS

Solid-state battery-style mobile microreactor

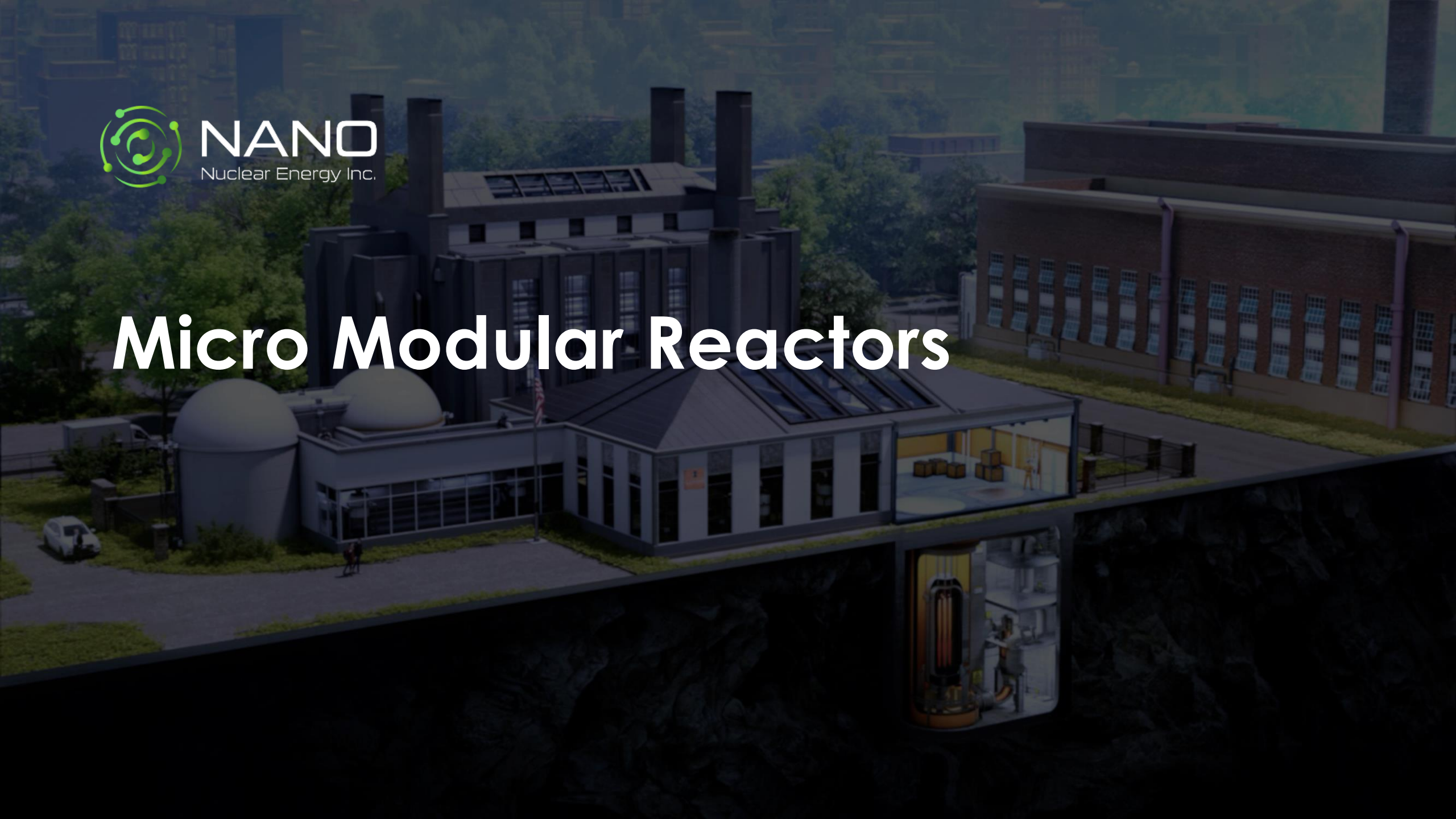
Supply Chain

STS Secured Transportation Services

HALEU Energy Fuel Inc.

LIS TECHNOLOGIES INC.

(through strategic partnership & investment)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Micro Modular Reactors

Micro Modular Reactors

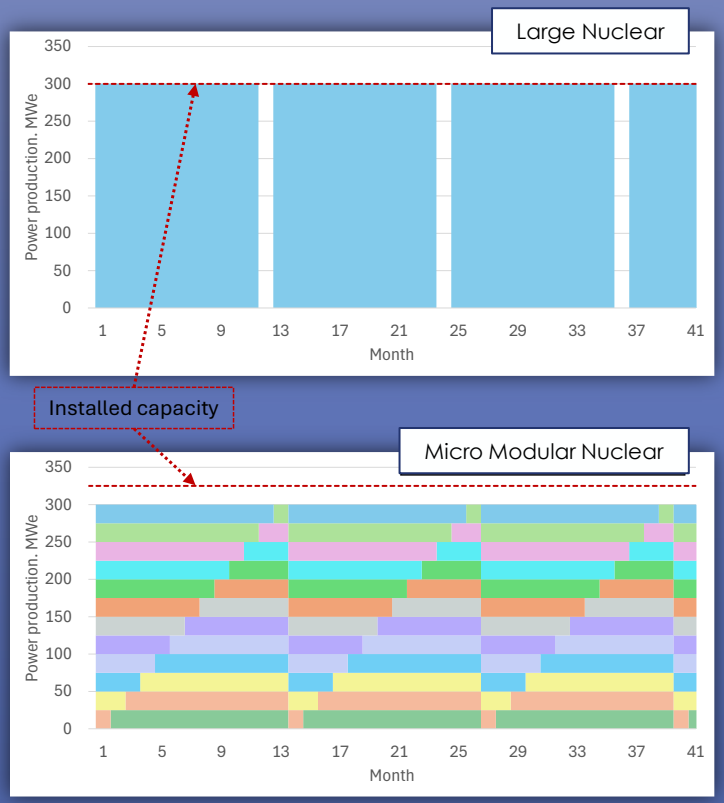
Game-Changing Nuclear Technology

- **Gen-IV Nuclear Technology**
  - Non-water-cooled reactors
  - Fully walk-away safe/passively safe
  - Physics-based machines
- **Standardized modular configuration**
  - Commercial off-the-shelf components
  - Flexible configuration
  - Focus on deployability
- **Micro-size**
  - 100 MW_{th} or less
  - Factory-manufacturable
  - Reduced upfront capital investment
  - Easily tailored to the customer needs

Micro Modular Reactors

Market Relevance and Alignment

Grid-independance



- **Relevant Markets:**

Data Centers

Mining / Remote Sites

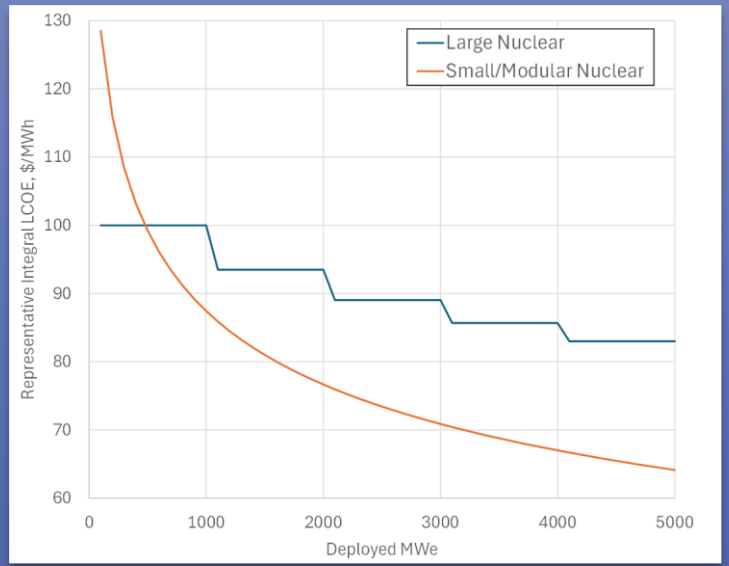
Advanced Manufacturing / Process Heat

Transportation Hubs

Utilities

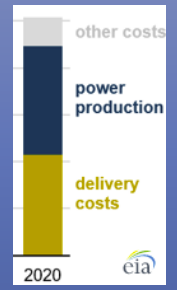
Refineries & Petrochemicals

Cost Competitiveness



Colocation Capable

Across the country, clean energy projects face yearslong wait times to connect to transmission grids. Similar bottlenecks in grid capacity are making it harder and harder for data centers to obtain the power they need.



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KRONOS MMR Technology

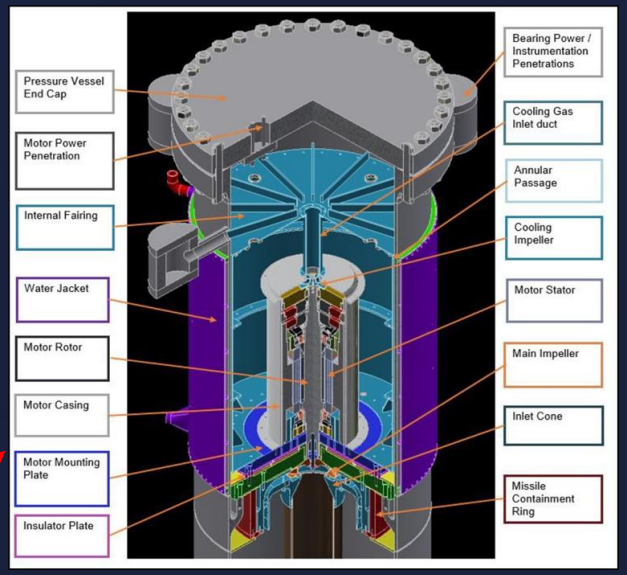
KRONOS MMR

Prismatic High-Temperature Gas-cooled Reactor

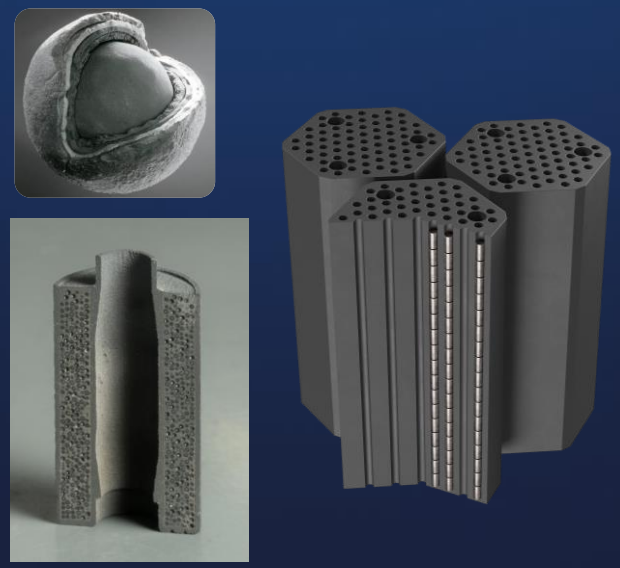
KRONOS Standard Design Characteristics		
Materials	Coolant	Helium
	Fuel	TRISO
	Enrichment	9.9%
	Moderator	Graphite
	Structure	Steel
	Buildings	Pre-fab + concrete structures
Reactor Characteristics	Power	~15 Mwe/45 MWth
	Pressure	6 MPa
	Coolant T.	300-660°C
	Fuel mass	<1 ton
Balance of Plant	IHX	Printed-Circuit Heat Exchanger
	Secondary Medium	Molten Salt (solar salt)
	Electricity Production	Steam generator and turbines
	Efficiency	35-36%
Attributes	Passive safety, energy storage, road transportable components	

KRONOS MMR
Key Reactor Systems

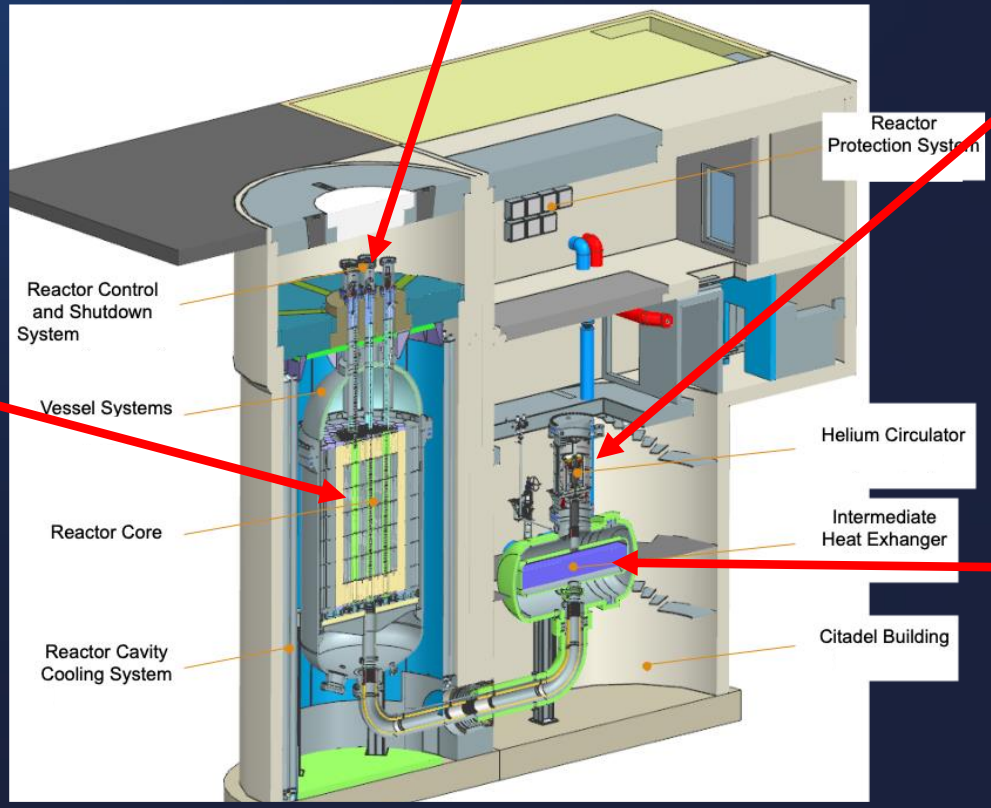
Control Rod Drive Unit



Helium Circulator Design



TRISO Encased in Ceramic Matrix

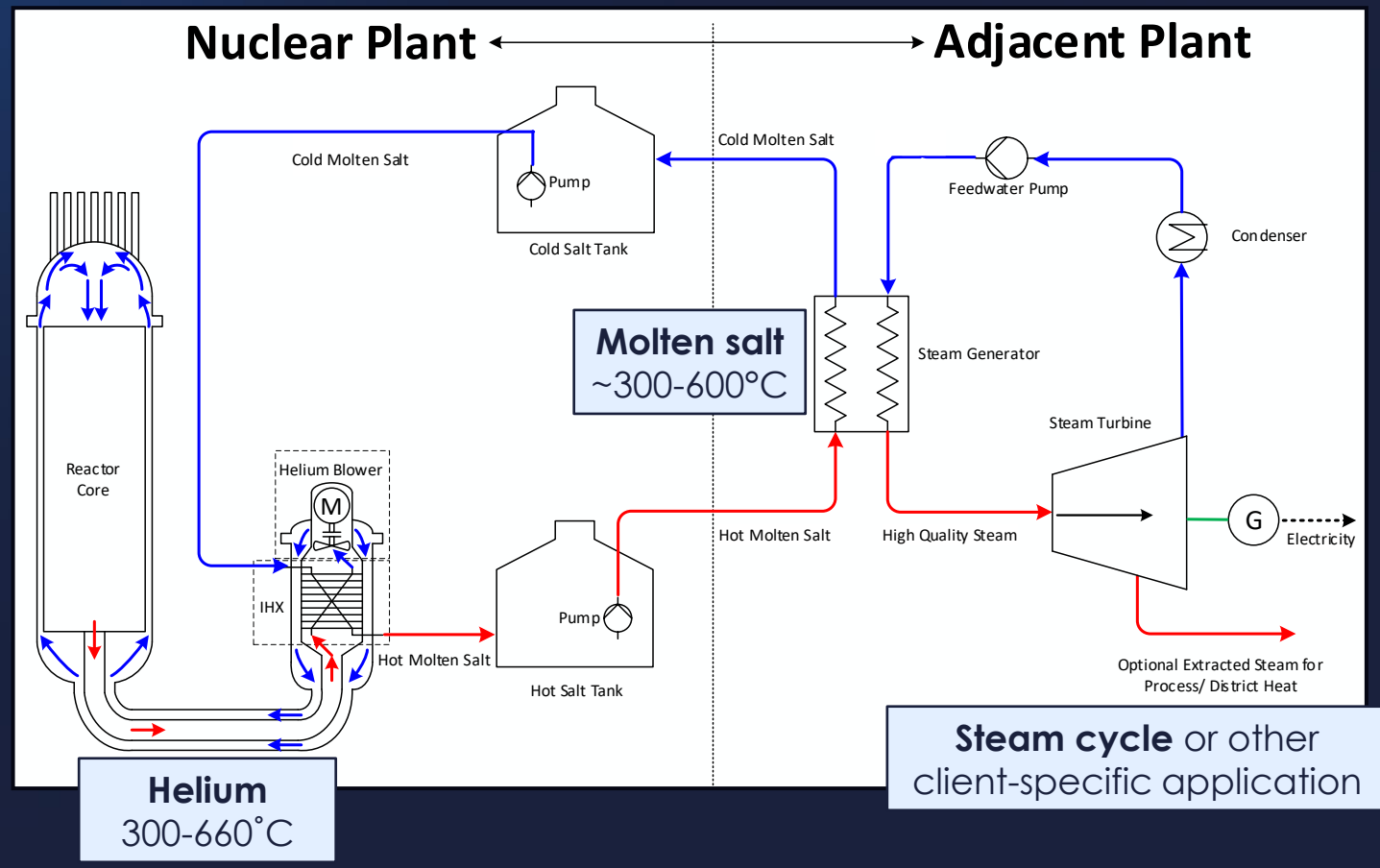


Printed-Circuit Heat Exchanger

Balance of Plant

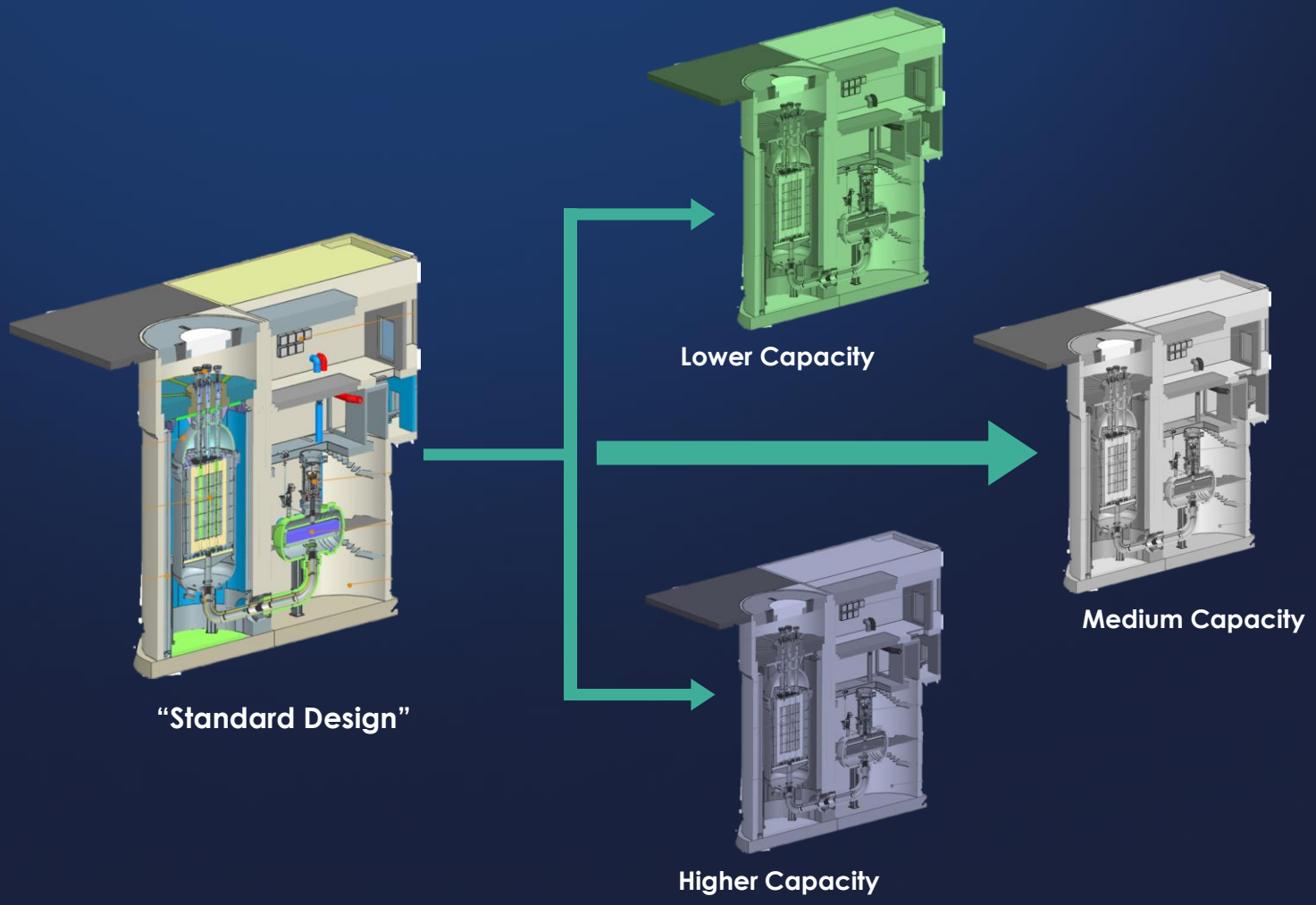
Intermediate Loop for Operational Flexibility

- **Solar salt**
  - Same technology as Concentrated Solar Plants
  - Isolates reactor from demand fluctuation
  - Temperatures limited by freezing and decomposition
  - Reactor Control System (RCS) balances reactor, salt, and BOP systems



Design Modularity

Deployment Versatility



Standardization and modularity provides versatility and aligns with various industries and projects scales

- **Option 1:** Standard design can be set to operate at almost any power below 20 MWe for one local unit for specialty needs
- **Option 2:** Multiple units can be distributed to deliver power where needed
- **Option 3:** Several units can be modularly deployed to serve projects up to 1GWe+

KRONOS can scale up effectively to meet staged expansions of large projects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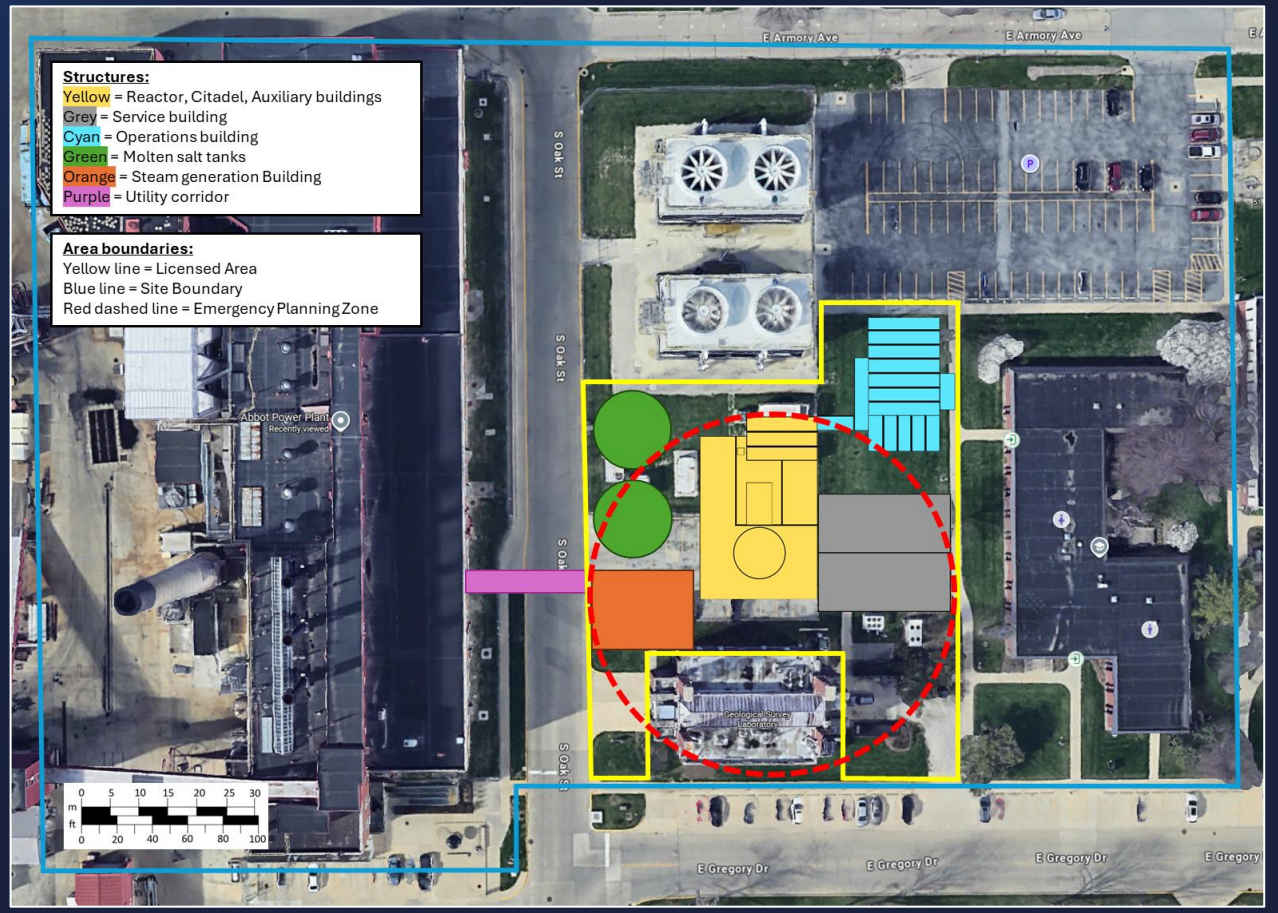
Status of First Deployment Project

UIUC Project Overview

The first KRONOS MMR deployment

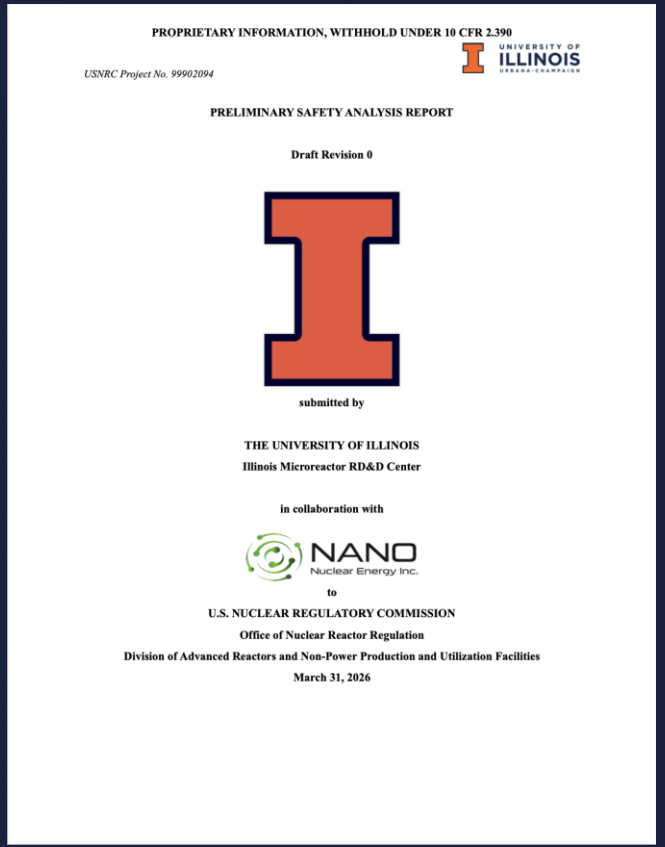
- **Mission**: advancing cutting-edge research, elite operator training, and impactful community outreach
- **Full-scale, full-power KRONOS** reactor, licensed and operated to power world-class university R&D
- Strategically **located on campus** next to Abbott Power Plant, delivering real energy to support campus operations
- **Team effort**, including hundreds of contributors



Progress Towards Demonstration

Submitted Construction Permit Application to NRC in Q1 2026

- **Construction Permit Application** (PSAR and Environmental Report) submitted to NRC on March 31, 2026
- Docketed with no acceptance issues by the NRC: permit issuance expected in 2027
- Publicly available on NRC ADAMS site
- Many contributors:
  - NANO Nuclear
  - University of Illinois
  - Technology and equipment vendors / partners



PROPRIETARY INFORMATION, WITHHOLD UNDER 10 CFR 2.390

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

USNRC Project No. 99902094

PRELIMINARY SAFETY ANALYSIS REPORT

Draft Revision 0

submitted by

THE UNIVERSITY OF ILLINOIS
Illinois Microreactor RD&D Center

in collaboration with

NANO Nuclear Energy Inc.

to

U.S. NUCLEAR REGULATORY COMMISSION
Office of Nuclear Reactor Regulation
Division of Advanced Reactors and Non-Power Production and Utilization Facilities
March 31, 2026

Thank you!

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Nuclear Energy Inc.